

Der p 1 (SEQ ID NO: 19)

MKIVLAIASLLALSAVYARPSSIKTFFEEYKKAFNKSYATFEDEEAAR
KNFLESVKYVQSNGGAINHLSDSLDEFKNRFLMSAEAFEHLKTQF
DLNAETNACSINGNAPAEIDLQRQMRTVTPIRMQGGCGSCWAFSGV
AATESAYLAYRNQSLDLAEQELVDCASQHGCHGDTIPRGIEYIQHN
GVVQESYYRYVAREQSCRSPNAQRFGISNYCQIYPPNVNKIREALA
QTHSAIAVIIGIKDLDARHYDGRTHQRDNGYQPNTYHAVNIVGYSN
AQGVDYWIVRNSWDTNWGDNGYGYFAANIDLMMIEEYPYVVIL

Der p 2 (SEQ ID NO: 20)

MMYKILCLSLLVAAVARDQVDVKDCANHEIKVLVPGCHGSEPCII
HRGKPFQLEAVFEANQNTKAKIEIKASIDGLEVDVPGIDPNACHY
MKCPLVKGQQYDIKYTWNVPKIAPKSENVVTVKVMGDDGVLAC
AIATHAKIRD

Der p 3 (SEQ ID NO: 21)

MIIYNILIVLLAINTLANPILPASNATIVGGEKALAGECPYQISLQS
SSHFCGGTILDEYWILTAAHCVAGQTASKLSIRYNSLKHSLGGEKIS

3. On page 51, please replace all of the text on page 51 with the following text:

VAKIFAHEKYDSYQIDNDIALIKLSPMKLNQKNAKAVGLPAKGSD
VKVGDQVRVSGWGYLEEGSYSLPSELRRVDIAVVSRKECNELYSKA
NAEVTDNMICGGDVANGKDSCQGDGGPVVDVKNNQVVGIVSW
GYGCARKGYPGVYTRVGNFIDWIESKRSQ

Der p 4 (SEQ ID NO: 22)

KYXNPFIGXRSVITXLME

Der p 5 (SEQ ID NO: 23)

MKFIIAFFVATLAVMTVSGEDKKHDYQNEFDLLMERIHEQIKKGE
LALFYLQEIQINHFEEKPTKEMDKIVAEVDTHAMIDGVRGVLDRL
MQRKDLDIFEQYNLEMAKKSGDILERDLKKEEARVKKIEV

Der p 6 (SEQ ID NO: 24)

MMKIIIAAAAIVAVASADPHYDKIIIINKAVDIAVAAIEKSEED
PMKVPDHSDKFERHIGHDLKGELDMRNIQVRGLKQMKRVGDANV
FSEDFGAAKAIITVGAHDIAASMEYDIAVKEGDIHPNTHVISDIOI
IAVVESEAASEFGNMIIISSEVARQIANAVANHGGSHDPIIAVSE
VLLAIFQDIVRAEMIKVIALPAFKKELERNNQ

Der p9 (SEQ ID NO: 26)

IVGGSNASPGDAVYQIAL

Dermatophagoides farinae

Der f 1 (SEQ ID NO: 27)

MKFVLAIASLLVLTYYARPASIKTFEFKKAFNKNYATVEEEVARK

4. On page 52, please replace all of the text on page 52 with the following text:

NFLESLKYVEANKGAINHLSDSLDEFKNRYLMSAEAFEQLKTQFD
LNAETSACRINSVNVPSEDLRSLRTVTPIRMQGGCGSCWAFSGVA
ATESAYLAYRNTSDLSEQELVDCASQHGCHGDTIPRGIEYIQQNG
VVEERSYPYVAREQRCCRPNSQHYGISNYCQIYPPDVVKQIREALTQT
HTAIAVIIGIKDLRAFQHYDGRTHQHDNGYQPNTHAVNIVGYGSTQ
GDDYWIVRNSWDTTWGDSGYGYFQAGNNLMMIEQYPYVVIM

Der f 2 (SEQ ID NO: 28)

MISKILCLSLLVAAVVADQVDVKDCANNEIKKVMVDGCHGSDPCII
HRGKPFTLEALFDANQNTKTAKIEIKASLDGLEIDVPGIDTNACHFM
KCPLVKGQQYDIKYTWNPKIAPKSENVVTVKLIGDNGVLACAIA
THGKIRD

Der f 3 (SEQ ID NO: 29)

MMILTIIVVLLAANILATPILPSSPNATIVGGVKAQAGDCPYQISLQSS
SHFCGGSILDEYWILTAAHCVNGQSAKKLSIRYNTLKHASGGEKIQV
AEIYQHENYDSMTIDNDVALIKLKTPMTLDQTNAKPVPLPAQGSBV
KVGDKIRVSGWGYLQEGLSYSLPSELQRVDIDVVSREQCDQLYSKAG
ADVSENMICGGDVANGGVVDSCQGDGGPVVDVATKQIVGIVSWGY
GCARKGYPGVYTRVGNFVDWIESKRSQ

Der f 4 (SEQ ID NO: 30)

AVGGQDADLAEAPFQISLLK

Der f 7 (SEQ ID NO: 31)

MMKELLIAAVAFVAVSADPIHYDKITEEINKAIDDAIAAIEQSETIDP

VAI SUEISDEGNITMISFFVRQEANVVNHIGGI SHEDPIEGVLSDV

TAIFQDTYRKEMTKVLAPAFKRELEKN

5. On page 53, please replace all of the text on page 52 with the following text:

Additional mite allergen sequences (NCBI entrez accession)

1170095; 1359436; 2440053; 666007; 487661; 1545803; 84702; 84699;
625532; 404370; 1091577; 1460058; 7413; 9072; 387592.

Cat

Felis sequences

1082946 Fel dI chain 2 precursor cat (SEQ ID NO: 32)

MRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLDSL
LTKVNATEPERTAMKKIQDCYVENGLISRVDGLVMTTISSSKDCM
GEAVQNTVEDLKLNLTLGR

1082945 Fel dI chain 1 short form cat (SEQ ID NO: 33)

MLDAALPPCPTVAATADCEICPAVKRDVDLFLTGTPEYVEQVAQ
YKALPVVLENARILKNCVDAKMTEEDKENALSLLDKIYTSPLC

1082944 Fel dI chain 1 long form precursor cat (SEQ ID NO: 34)

MKGARVLVLLWAALLLIWGGNCEICPAVKRDVDLFLTGTPEYVE
QVAQYKALPVVLENARILKNCVDAKMTEEDKENALSLLDKIYTSPL
C

Additional Felis sequences (NCBI entrez accession):

539716; 539715; 423193; 423192; 423191; 423190; 1364213; 1364212;
395407; 163827; 163823; 163825; 1169665; 232086; 1169666.

Latex

Hevea sequences:

6. On page 54, please replace all of the text on page 54 with the following text:

Hey b 1 (SEQ ID NO: 35)

MAEDEDNQQGQQGEGLKYLGIVQDAATYAVTTESNVYLEAKDKSG
PLQPGVDIIEGPVKNVAVPPLYNRFSYIPNGALKFVdstvvavsthdr
SLPPIVKDASIqvvsAIRAAPEAARS LASSLPGQTKILAKVFYGEN

Hey b 3 (SEQ ID NO: 36)

MAEEVEEERLKYLDFVRAAGVYAVDSFSTLYLYAKDISGPLKPGV

YAVIHWRAENKPLAVPQVANVVVPLAVYESIKYNDVARGELFQGY
RVSSYLPLLPTEKITKVFGDEAS

Additional Hevea sequences (NCBI entrez accession):

3319923; 3319924; 3087805; 1493836; 1486487; 1223884; 148211;
3451147; 1916805; 232267; 123335; 2501578; 3319662; 3288200;

1942537; 2392631; 2392630; 1421554; 1311006; 494093; 3183706; 3172534;
283243; 1170248; 1708278; 1706547; 464775; 266892;
231586; 123337; 116359; 123062; 2213877; 542013; 2144920; 1070656;
2129914; 2129913; 2129912; 100135; 82026; 1076559; 82028; 82027;
282933; 280399; 100138; 1086972; 108697; 1086976; 1086978;
1086978; 1086976; 1086974; 1086972; 913758; 913757; 913756;
234388; 1092500; 228691; 1177405; 18839; 18837; 18835; 18833;
18831; 1209317; 1184668; 168217; 168215; 168213; 168211; 168209;
348137.

Rye grass

Lolium sequences:

126385 Lol p 1 (SEQ ID NO: 37)

On page 55, please replace all of the text on page 55 with the following text:

MASSSSVLLVVALFAVFLGSAHGIAKVPPGPNTAEYGDKWLDAKS
TWYGKPTGAGPKDNGGACGYKNVDKAPFNGMTGCGNTPIFKDGR
GCGSCFEIKCTKPESCSGEAVTVTITDDNEEPIAPYHFDLSGHAFGS
MAKKGEEQNVRSAELELQFRRVKCKYPDDTKPTFHVEKASNPNY
LAILVKYVDGDGDVVAVDIKEKGKDKWIELKESWGAVWRIDTPDK
LTGPFTVRYTTEGGTKSEFEDVIPEGWKADTSYSAK

126386 Lol p 2a (SEQ ID NO: 38)

AAPVEFTVEKGSDEKNLALSIKYNKEGDSMAEVELKEHGSNEWLA
IHKNGDGWWEIKSDKPLKGPFNFRFVSEKGMRNVFDDVVPADFKV
GTTYKPE

126387 Lol p 3 (SEQ ID NO: 39)

TKVDLTVEKGSDAKTLVNLKYTRPGDTLAEVELRQHGSEEWEPM
TKKGNLWEVKSAKPLTGPMNFRFLSKGGMKNVFDEVIPFTAFTVGK
TYTPEYN

2498581 Lol p 5a (SEQ ID NO: 40)

PSPPRASSPISAAKAPGLIPKIDLAYDVAYKAALAHPRGQVRRIRH
CPHRSLRVIAGAIEVHAVKPATEEVLAAKIPTGELQIVDKIDAALKI
VAAVAAVAPENPKEIIVLSAENKALNECTGGAMRPISSSPPSRPR
SRPTPPPSPAAPLKAVVAAVATKALAMIQAQKAGKPAAVVVA
AATVAAVAAVAAVLPPLLVVQSLISLLIYY

2498582 Lol p 5b (SEQ ID NO: 41)

MAVQKHTVALFLAVALVAGPAASYAADAGYAPATPATPAAPATA

ATPATPATPATPAAVPSGKATTEEQKLIEKINAGFKAAVAAAIVVP

PADKYKTFVETFGTATNKFVEGLASGYADQSKNQLTSKLDAAALK

8. On page 56, please replace all of the text on page 56 with the following text:

LAYEAAQGATPEAKYDAYVATLTEALRVIAGTLLEVHAVKPAAEEV

KVGAIPAAEVQLIDKVDAAYRTAATAANAAPANDKFTVFENTFNN

AIKVSLGAAYDSYKFIPTLVAAVKQAYAAKQATAPEVKYTSETAL

KKAVTAMSEAEKEATPAAAATATPTPAAATATATPAAAYATATPA

AATATATPAAATATPAAAGGYKV

455288 Lol p isoform 9 (SEQ ID NO: 42)

MAVQKHTVALFLAVALVAGPAASYAADAGYAPATPATPAAPATA

ATPATPATPATPAAVPSGKATTEEQKLIEKINAGFKAAVAAAIVVP

PADKYKTFVETFGTATNKFVEGLASGYADQSKNQLTSKLDAAALK

LAYEAAQGATPEAKYDAYVATLTEALRVIAGTLLEVHAVKPAAEEV

KVGAIPAAEVQLIDKVDAAYRTAATAANAAPANDKFTVFENTFNN

AIKVSLGAAYDSYKFIPTLVAAVKQAYAAKQATAPEVKYTSETAL

KKAVTAMSEAEKEATPAAAATATPTPAAATATATPAAAYATATPA

AATATATPAAATATPAAAGGYKV

1582249 Lol p 11 (SEQ ID NO: 43)

DKGPGFVVTGRVYCDPCRAGFETNVSHNVEGATVAVDCRPFDGG

ESKLKAEATTDKDGWYKIEIDQDHQEEICEVVLAKSPDKSCSEIEEF

RDRARVPLTSNXGIKQQGIRYANPIAFFRKEPLKECGGILQAY

Additional *Lolium* sequences (NCBI entrez accession):

135480; 417103; 687261, 687259; 1771355; 2388662; 631955; 542131;

542130; 542129; 100636, 626029; 542132; 320616; 320615; 320614;

100638; 100634; 82450; 626028; 100639; 283345; 542133; 1771353;

1763163; 1040877; 1040875; 250525; 551047; 515377; 510911; 939932;

9. On page 57, please replace all of the text on page 57 with the following text

Olive tree

Olive seedlings

416610 Ole e 1 (SEQ ID NO: 44)

EDIPQPPVSQFHIQGQVYCDTCRAGFTELSEFIPGASLRLQCKDKEN
GDVTFTEVGYTRAEGLYSMLVE
RDHKNEFCEITLISSGRKDCNEIPTEGWAKPSLKFKLNTVNGTTRTV
NPLGFFKKEALPKCAQVYNKLGM
YPPNM

Parietaria

Parietaria sequences:

2497750 Par J P2 (SEQ ID NO: 45)

MRTVSMAALVVIAAALAWTSSAEPAPAPAPGEEACGKVVQDIMPC
LHFVKGEEKEPSKECCSGTKKLSEEVKTTEQKREACKCIVRATKGIS
GIKNELVAEVPKKCDIKTLPPITADFDCKSIQSTIFRGYY

1352506 Par J P5 (SEQ ID NO: 46)

MVRALMPCLPFVQGKEKEPSKGCCSGAKRLDGETKTGPQRVHACE
CIQTAMKTYSDIDGKLSEVPKHCGIVDSKLPPIDVNMDCKTVGVV
PRQPQLPVSLRHGPVTGPSDPAHKARLERPQIRVPPPapeKA

1532056 Par J P8 (SEQ ID NO: 47)

MRTVSMAALVVIAAALAWTSSAELASAPAPGEGPCGKVVHHIMPC
LKFVKGEEKEPSKCCSGTKKLSEEVKTTEQKREACKCIVAATKGIS
GIKNELVAEVPKKCGITTLPPITADFDCKSIESTIFRGYY

1532058 Par J P9 (SEQ ID NO: 48)

MRTVSAPSAVALVVIVAAAGLAWTLSASVAPPAPAPGSEETCGTVVR

10. On page 58, please replace all of the text on page 58 with the following text:

QIPVSI RHGPVTGPSDPAHKARIERPQIRVPPPapeKA

2497749 Par J P9 (SEQ ID NO: 49)

MRTVSARSSAVAVAVAVAVAWESSASAAPAPAPGSEETCGTVVR

LMPCLPFVQGKEKEPSKGCCSGAKRLDGETKTGPQRVHACECIQTA
MKTYSIDGKLVSEVPKHCGIVDSKLPPIDVNMDCKTLGVLYKG
N

1086003 Par j 1 (SEQ ID NO: 50)

MVRALMPCLPFVQGKEKEPSKGCCSGAKRLDGETKTGPQRVHACE
CIQTAMKTYSDIDGKLVSEVPKHCGIVDSKLPPIDVNMDCKTVGVV
PRQPQLPVSLRHGPVTGPSRSRPTKHGWRDPRLEFRPPHRKKPNP
AFSTLG

Additional Parietaria sequences (NCBI entrez accession):

543659; 1836011; 1836010; 1311513; 1311512; 1311511; 1311510; 1311509;
240971.

Timothy grass

Phleum sequences:

Phl p 1 (SEQ ID NO: 51)

MASSSSVLLVVVLFIAVFLGSAYGIPKVPPGPNIATYGDKWLDAKS
TWYGKPTGAGPKDNGGACGYKDVKDKPPESGMIGCGNPIFKSGRG
CGSCFEIKCTKPEACSGEPPVVVHITDDNEEPIAPYHFDSLGHAFGAM
AKKGDEQKLRSAQELELQFRRVKCKYPEGTVTFHVEKGNSPNYL
ALLVKYVNGDGDVVAVDIKEKGDKWIELKESWGAIWRIDTPDKL

11. On page 59, please replace all of the text on page 59 with the following text:

TGPFTVRYTTEGGTKTEAEDVIPEGWKADTSYESK

Phl p 1 (SEQ ID NO: 52)

TWYGKPTAAGPKDNGGACGYKDVKDKPPESGMIGCGNPIFKSGRG
CGSCFEIKCTKPEACSGEPPVVVHITDDNEEPIAAYHFDSLGHAFGSM
AKKGDEQKLRSAQELELQFRRVKCKYPEGTVTFHVEKGNSPNYL
ALLVKESGDGDVVAVDIKEKGDKWIELKESWGAIWRIDTPEVK

GPFTVRYTTEGGTKARAKDVIPEGWKADTAYESK

Phlp 2 (SEQ ID NO: 53)

MSMASSSSSLLAMAVLAALFAGAWCVPKVTFTVEKGSNEKHLAV
LVKYEGDTMAEVELREHGSDEWVAMTKGEGGVWTFDSEEPLQGP
ENFRFLTEKGGMKNVFDDVVPEKYTIGATYAPEE

Phl p 5 (SEQ ID NO: 54)

ADLGYGGPATPAAPAEAAPAGKATTEEQKLIEKINDGFKAALAAA
AGVPPADKYKTFVATFGAASNKAFAEGLSAEPKGAAESSSKAALTS
KLDAAYKLAYKTAEGATPEAKYDAYVATLSEALRIIAGTLEVHAV
KPAAEEVKVIPAGELQVIEKVDSAFKVAATAANAAPANDKFTVFEA
AFNNAIKASTGGAYESYKFIPALEAAVKQAYAATVATAPEVKYTVF

12. On page 60, please replace all of the text on page 59 with the following text:

ETALKKAITAMSEAQKAAKPATEATATATAAVGAATGAATAATGG
GYKV

Phl p 5 (SEQ ID NO: 55)

ADLGYGGPATPAAPAEAAPAGKATTEEQKLIEKINDGFKAALAAA
AGVPPADKYKTFVATFGAASNKAFAEGLSAEPKGAAESSSKAALTS
KLDAAYKLAYKTAEGATPEAKYDAYVATLSEALRIIAGTLEVHAV
KPAAEEVKVIPAGELQVIEKVDSAFKVAATAANAAPANDKFTVFEA
AFNNAIKASTGGAYESYKFIPALEAAVKQAYAATVATAPEVKYTVF
ETALKKAITAMSEAQKAAKPATEATATATAAVGAATGAATAATGG
YKV

AAAAYPRRGPRGCGPGRSYIADAGYAPATPAAAAGAAACKAATTEEQ
KLIEDINVGKAAVAAAASVPAADKEKTFEAAFTSSSKAAAACKAPG
AEEKDAAYSAAYKAAVGAATPEAKEDSEVASCTEAERVLAGAEEA
HAVKPVTEEPGMAKIPAGEIQHDKIDAAEKVAATAAAALAPADDKE

TVFEAAFNKAIKESTGGAYDTYKCIPSLEAAVKQAYAATVAAAPQV
KYAVFEAALT KAITAMSEVQKV SQPATGAATVAAGAATT AAGAAS
GAATVAAGGYKV

Phl p 5a (SEQ ID NO: 57)

ADLGYPATPAAPAAGYTPATPAAPAGADAAGKATTEEQKLIEKIN
AGFKAALAGAGVQPADKYRTFVATFGPASNKAFAEGLSGEPKGAA
ESSSKAALTSKLDAA YKLA YKTAEGATPEAKYDAYVATLSEALRII
AGTLEVHAVKPAAEVVKVIPAGELQVIEKVDAAFKVAATAANAAP
ANDKFTVFEAAFNDEIKASTGGAYESYKFIPALEAAVKQAYAATVA
TAPEVKYT VFETALKKAITAMSEAQKA AKPAAA ATATATAAVGAA
TGAATAATGGYKV

Phl p 5 (SEQ ID NO: 58)

MAVQKYTV ALFLAVALVAGPAASYAADAGYAPATPAAAGAEAGK
ATTEEQKLIEDINVGFKA AVAAAASVPAADKFKT FEAFTSSSKAA
TAKAPGLVPKLDAA YSVSYKAAVGATPEAKFDSFVASLTEALRVI
GALEVHAVKPVTEEPGMAKIPAGELQHDKIDA AFKVAATAAA TAP
ADTVFEAAFNKAIKESTGGAYDTYKCIPSLEAAVKQAYAATVAAAP
QVKYAVFEAALT KAITAMSEVQKV SQPATGAATVAAGAATT AAG
AASGAATVAAGGYKV

13. On page 61, please replace all of the text on page 61 with the following text:

Phl p 5 (SEQ ID NO: 59)

MAVQKYTV ALFLAVALVAGPAASYAADAGYAPATPAAAGAEAGK

GALEVHAVKPV TDPAWPKIPAGELQHDKIDA AFKVAATAAA TAP
ADDKFTV FEAAFNKAIKESTGGAYDTYKCIPSLEAAVKQAYAATV
AAAPQVKYAVV AAT EKAITAMSEVQKV SQPATGAATVAAGAATV

ATGAASGAATVAAGGYKV

Phl p 5 (SEQ ID NO: 60)

ADAGYAPATPAAAGAEAGKATTEEQKLIEDINVGFKAAVAAAASV
PAADKEKTFEAAFTSSSKAATAKAPGLVPKLDAAYSVAYKAAVGA
TPEAKFDSFVASLTERVIAGALEVHAVKPVTEEPGMAKIPAGEI
QIIDKIDAAFKVAATAAAATAPADDKFTVFEAFNKAIKESTGGAYD
TYKCIPSLEAAVKQAYAATVAAAPQVKYAVFEAALT KAITAMSEV
QKVSQPATGAATVAAGAATTAAGAASGAATVAAGGYKV

Phl p 5 (SEQ ID NO: 61)

SVKRSNGSAEVHRGAVPRRGPRGGPGRSYAADAGYAPATPAAAGA
EAGKATTEEQKLIEDINVGFKAAVAAAASVPAADKEKTFEAAFTSS
SKAATAKAPGLVPKLDAAYSVAYKAAVGATPEAKFDSFVASLTEA
LRVIAGALEVHAVKPVTEEPGMAKIPAGEI QIIDKIDAAFKVAATAA
ATAPADDKFTVFEAFNKAIKESTGGAYDTYKCIPSLEAAVKQAYA
ATVAAAPQVKYAVFEAALT KAITAMSEVQKVSQPATGAATVAAGA
ATTAAGAASGAATVAAGGYKV

Phl p 5 (SEQ ID NO: 62)

MAVHQYTVALFLAVALVAGPAGSYAADLGYGPATPAAPAAGYTP
ATPAAPAGAEPA GKATTEEQKLIEKINAGFKAALAAAAGVPPADKY
RTFVATFGAASNKAFAEGLSGEPKGAAESSSKAALTSKLDAAYKLA

14. On page 62, please replace all of the text on page 62 with the following text:

YKTAEGATPEAKYDAYVATVSEALRIHAGTLEVHAVKPAAEEVKVI

EGGAYESNKIPAEFAAVKQAYAATIVIAPEVKYIVELAKKKAH
AMSEAQKA AKPAAAATATAAVGAATGAATAATGGYKV

Phl p 5 (SEQ ID NO: 63)

ADEGYGGPATPAAPAAAPAGKATTEEQKLIEKINDGEKAALAAA

AGVPPADKYKTFVATEGAASNKAFAEGLSAEPKGAAESSSKAALTS
KLDAAYKLAJKTAEGATPEAKYDAYVATLSEALRIAGTLEVHAV
KPAAEEVKVIPAGELOVIEKVDSAFKVAATAANAAPANDKFTVFEA
AFNNAIKASTGGAYESYKFIPALEAAVKQAYAATVATAPEVKYTVF
ETALKKAFTAMSEAQKAAPATEATATATAAVGAATGAATAATG
GYKV

Phl p5b (SEQ ID NO: 64)

AAA AVPRRGPRGGPGRSYTADAGYAPATPAAAGAAAGKATTEEQ
KLIEDINVGFKAAVAAAASVPAADKFKTFEAAFTSSKAAAAKAPG
LVPKLDAAYSVAYKAAVGATPEAKFDSFVASLTEALRVIAGALEV
HAVKPVTEEPGMAKIPAGELOQIIDKIDAAFKVAATAAAATAPADDKF
TVFEAAFNKAIKESTGGAYDTYKCIPSLEAAVKQAYAATVAAAPQV
KYAVFEAALT KAITAMSEVQKVSQPATGAATVAAGAATTAAGAAS
GAATVAAGGYKV

Phl p5a (SEQ ID NO: 65)

ADLGYPATPAAPAAGYTPATPAAPAGADAAGKATTEEQKLI
AGFKAALAGAGVQPADKYRTFVATFGPASNKAFAEGLSGEPKGAA
ESSSKAALTSKLDAAJKLAJKTAEGATPEAKYDAYVATLSEALRII
AGTLEVHAVKPAAEVKVIPAGELOVIEKVDAAFKVAATAANAAP
ANDKFTVFEAAFNDEIKASTGGAYESYKFIPALEAAVKQAYAATVA
~~TAPEVKYTVFETALKKAITAMSEAQKAAPAAAATATATAAVGAA~~

15. On page 63, please replace all of the text on page 63 with the following text:

Phl p5 (SEQ ID NO: 66)

AVPRRGPRGGPGRSYAADAGYAPATPAAAGAEAGKATTEEQKLI
DINA GEKAAVAAAASVPAADKFKTFEAAFTSSKAAAAKAPG
LDAAYSVAYKAAVGATPEAKFDSFVASLTEALRVIAGALEVHAVK

PVTEEPGMKIPAGELQIIDKIDAAFKVAATAAATAPADDKFTVFE
AAFNKAIKESTGGAYDTYKCIPSLEAAVKQAYAATVAAAPQVKYA
VFEAALTAKITAMSEVQKVSPATGAATVAAGAATTATGAASGAA
TVAAGGYKV

Phl p 5b (SEQ ID NO: 67)

MAVPRRGPRGGPGRSYTADAGYAPATPAAAGAAAGKATTEEQKLI
EDINVGFKAAVAARQRPAADKFKTFEAASPRHPRPLRQGAGLVPKL
DAAYSVAYKAAVGATPEAKFDSFVASLTEALRVIAGALEVHAVKP
VTEEPGMKIPAGELQIIDKIDAAFKVAATAAATAPADDKFTVFEA
AFNKAIKESTGGAYDTYKCIPSLEAAVKQAYAATVAAAEEVKYAV
FEAALTAKITAMSEVQKVSPATGAATVAAGAATTAAGAASGAAT
VAAGGYKV

Phl p 5 (SEQ ID NO: 68)

MAVHQYTVALFLAVALVAGPAASYAADLGYGPATPAAPAAGYTP
ATPAAPAEAAPAGKATTEEQKLIIEKINAGFKAALAAAAGVQPADK
YRTFVATFGAASNKAFAEGLSGEPKGAAESSSKAALTSKLDAAVYKL
AYKTAEGATPEAKYDAYVATLSEALRIHAGTLEVHAVKPAEEEVKV
IPAGELQVIEKVDAAFKVAATAANAAPANDKFTVFEAAFNDAIKAS
TGGAYESYKFIPALEAAVKQAYAATVATAPEVKYTVFETALKKAIT
AMSEAQKAAKPAAAATATATAAVGAATGAATAATGGYKV

Phl p 5 (SEQ ID NO: 69)

16. On page 64, please replace all of the text on page 64 with the following text:

SNKAFAEGIISGEPKGAAEASSSKAATISKIDAAVYKLAYKIAFGATPF
AKYDAYVATLSEALRIHAGTLEVHAVKPAEEEVKVIPAAELQVIEKV
DVAFKVAATAANAAPANDKFTVFEALVNDAIKASIGGAYESYKFIP
ALAAVKQAYAATVATAPEVKYTVFETALKKAITAMSEAQKAAKP

PPLPPPPQPPPLAATGAATAATGGYKV

Phl p 5 (SEQ ID NO: 70)

MAVHQYTVALFLAVALVAGPAASYAADLGYGPATPAAPAAGYTP
ATPAAPAEAAPAGKATTEEQKLIEKINAGFKAALAAAAGVQPADK
YRTFVATFGAASNKAFAEGLSGEPKGAAESSSKAALTSKLDAAYKL
AYKTAEGATPEAKYDAYVATLSEALRIIAGTLEVHAVKPAEEVKV
IPAGELQVIEKVDAAFKVAATAANAAPANDKFTVFEAAFNDAIKAS
TGGAYESYKFIPALEAAVKQAYAATVATAPEVKYTVEETALKKAIT
AMSEAQKAAKPAAAATATATAAVGAATGAATAATGGYKV

Phl p 5b (SEQ ID NO: 71)

MAVPRRGPRGGPGRSYTADAGYAPATPAAAGAAAGKATTEEQKLI
EDINVGFKAAVAARQRPAADKFKTFEAASPRHPRPLRQGAGLVPKL
DAAYSVAYKAAVGATPEAKFDSFVASLTEALRVIAGALEVHAVKP
VTEEPGMAKIPAGELQIIDKIDAAFKVAATAAATAPADDKFTVFEA
AFNKAIKESTGGAYDTYKCIPSLEAAVKQAYAATVAAAAEVKYAV
FEAALTKAITAMSEVQKVSPATGAATVAAGAATTAAAGAASGAAT
VAAGGYKV

Phl p 5a (SEQ ID NO: 72)

ADLGYPATPAAPAAGYTPATPAAPAGADAAGKATTEEQKLIEKIN
AGFKAALAGAGVQPADKYRTFVATFGPASNKAFAEGLSGEPKGAA
ESSSKAALTSKLDAAYKLAYKTAEGATPEAKYDAYVATLSEALRII
AGTLEVHAVKPAEEVKVIPAGELQVIEKVDAAFKVAATAANAAP

ANDKEIVVAAENDEIKASLGGAYESYKFIPALEAAVKQAYAATV
TAPEVKYTVEETALKKAITAMSEAQKAAKPPPLPPPPQPPPLAATGA
AAVAGGYKV

Phl p 5 (SEQ ID NO: 73)

MAVHQYTVALFLAVALVAGPAASYAADLGYGPATPAAPAAGYTP
ATPAAPAEAAPAGKATTEEQKLIEKINAGEKAALAAAAGVQPADK
YRTFVATFGAASNKAFAEGLSGEPKGAAESSSKAALTSLDAAYKL
AYKTAEGATPEAKYDAYVATLSEALRHAGTLEVIHAVKPAAEEVKV
IPAGELQVIEKVDAAFKVAATAANAAPANDKFTVFEEAFNDAIKAS
TGGAYESYKFIPALEAAVKQAYAATVATAPEVKYTFETALKKAIT
AMSEAQKAAKPAAAATATATAAVGAATGAATAATGGYKV

Phl p 6 (SEQ ID NO: 74)

MAAHKFMVAMFLAVAVVLGLATSPTAEGGKATTEEQKLIEDVNA
SFRAAMATTANVPPADKYKTFEAAFTVSSKRNLADAVSKAPQLVP
KLDEVYNAAYNAADHAAPEDKYEAFVLHFSEALRIIAGTPEVHAV
KPGA

Phl p 6 (SEQ ID NO: 75)

SKAPQLVPKLDEVYNAAYNAADHAAPEDKYEAFVLHFSEALHIIAG
TPEVHAVKPGA

Phl p 6 (SEQ ID NO: 76)

ADKYKTFEAAFTVSSKRNLADAVSKAPQLVPKLDEVYNAAYNAAD
HAAPEDKYEAFVLHFSEALHIIAGTPEVHAVKPGA

18. On page 66, please replace all of the text on page 66 with the following text:

Phl p 6 (SEQ ID NO: 77)

TEEQKLIEDVNASFRAAMATTANVPPADKYKTLEAAFTVSSKRNL
DAVSKAPQLVPKLDEVYNAAYNAADHAAPEDKYEAFVLHFSEALR

Phl p 6 (SEQ ID NO: 78)

MAAHKEMVAMFLAVAVVLGLATSPTAEGGKATTEEQKLIEDINAS
SFRAAMATTANVPPADKYKTLEAAFTVSSKRNLADAVSKAPQLVP
KLDEVYNAAYNAADHAAPEDKYEAFVLHFSEALRIIAGTPEVHAVK

PGA

Phl p 6 (SEQ ID NO: 79)

MVAMFLAVAVVLGLATSPTAEGGKATTEEQKLIEDVNASFRAAMA
TTANVPPADKYKTFEAAFTVSSKRNLADAVSKAPQLVPKLDEVYN
AAYNAADHAAPEDKYEAFVLHESALRIIAGTPEVHAVKPGA

Phl p 7 (SEQ ID NO: 80)

MADDMERIFKRFDTNGDGKISLSELTDAIRTLGSTSADEVQRMMA
EIDTDGDGFIDFNEFISFCNANPGLMKDVAKVF

Phl p 11 (SEQ ID NO: 81)

MSWQTYVDEHLMCEIEGHHLASAAILGHDTVWAQSADFPQFKPE
EITGIMKDFDEPGHLAPTGMFVAGAKYMIQGEPEGRVIRGKKGAG
GITIKKTGQALVVGIYDEPMTPGQCNMVVERLGDYLVEQGM

Additional Phleum sequences (NCBI entrez accession):

458878; 548863; 2529314; 2529308; 2415702; 2415700; 2415698;
542168; 542167; 626037; 542169; 541814; 542171; 253337; 253336;
453976; 439960

19. On page 67, please replace all of the text on page 67 with the following text:

Wasp (and related)

Vespa sequences:

465054 ALLERGEN VES V 5 (SEQ ID NO: 82)

MEISGLVYLIIVTHDLPYKGANNYCKIKCLKGGVHTACKYGSLKPN
CGNKVVVSYGLTKQEKKDILKEHNDERQKIARGLETRGNPGPQPPA

AEFGSTAAKYDDPVKIAKMWEDPAKDYNPKKKESGNDTEKIGHY
TQMIVWANTKEVGCGSIKYIQEKWHKHYLVCNYGPSGNFMNEELY

QIK

1709545 ALLERGEN VES M 1 (SEQ ID NO: 83)

GPKCPENSDTVSHIETRENNRDLYTLQTLQNHPEFKKTITRPVVF
ITHGFTSSASEKNEFINLAKALVDKDNYMVISIDWQTAACTNEYPGEL
KYAYYPTAASNTRIVGQYIATITQKLVKDYKISMANIRLIGHSLGAH
VSGFAGKRVQELKLGKYSEIIGLDPARPSFDSNHCSERLCETDAEYV
QIHTSNYLGIEKILGTVDFYMNNGKNQPGCGRFFSEVCSTRAVIY
MAECIKHECCLIGIPRSKSSQPISRCTKQECVCVGLNAKKYPSRGSFY
VPVESTAPFCNNKGKII

1352699 ALLERGEN VES V 1 (SEQ ID NO: 84)

MEENMNLKYLLLTVYFVQLNCCYGHGDPLSYELDRGPKCPFNSD
TVSIIETRENRRDLYTLQTLQNHPEFKKTITRPVVFITHGFTSSAS
ETNFINLAKALVDKDNYMVISIDWQTAACTNEAAGLKYLYYPTAA
RNTRLVGQYIATITQKLVKHYKISMANIRLIGHSLGAHASGFAGKKV
QELKLGKYSEIIGLDPARPSFDSNHCSERLCETDAEYVQIHTSNYLG
TEKTLGTVDFYMNNGKNQPGCGRFFSEVCSSHRAVIYMAECIKHE
CCLIGIPSKSSQPISCTKQECVCVGLNAKKYPSRGSFYVPVESTAP
FCNNKGKII

20. On page 68, please replace all of the text on page 68 with the following text:

1346323 ALLERGEN VES V 2 (SEQ ID NO: 85)

SERPKRVENIYWNVPTFMCHQYDLYFDEVTNFNIKRNSKDDFQGD
KIAIFYDPGEFPALLSLKDGYKKRNGGVPQEGNITIHLQKFIENLD
KIYPNRNFSGIGVIDFERWRPIFRQNWGNGMKIHKNFSIDLVRNEHPT
WNKKMIELEASKRFEKYARFFMEETLKLAKKTRKQADWGYYGYP

FPDQRIGLAQGRAKEAVRISNNIKHSPKATSYWWYAYQDFENTE
LTETDVKKTFQEIVNGGDGHIWGSSSDVNSLSKCKRLQDYLLTVLG
PAINAVHAWA

549194 ALLERGEN VES V 1 (SEQ ID NO: 86)

MDSPCLVALLVESFVGSCFSDNPIDSCWRGDSNWAQNRMKLADC
AVGFGSSTMGGKGGDLYTNTNSDDDPVNAPGTLRYGATRDRPI.
WIFSGNMNIKLKMPMYIAGYKTFDGRGAQVYIGNGGPCVFIKRVS
NVIIHGLYLYGCSTSVLGNVLINESFGVEPVHPQDGDAUTLRTATNI
WIDHNSFSNNSDGLVDVLTSTGVTISNNLFFNHHKVMSLGHDDAY
SDDKSMKVTVAFNQFGPNCGQRMPRARGLVHVANNYDPWTIY
AIGGSSNPTILSEGNSFTAPNESYKKQVTIRIGCKTSSCSNWVWQST
QDVFYNGAYFVSSGKYEGGNIYTKKEAFNVENGNAATPHLTQNAGV

LTCSSLKRC

Dog

Canis sequences:

Can f 1 (SEQ ID NO: 107)

MKTLLLTIGFSLIALQQAQDTPALGKDTVAVSGKWYLKAMTADQE
VPEKPDSVTPMILKAQKGGNLEAKITMLTNGQCQNITVVLHKTSEP
GKYTAYEGQRVVFIQPSPVRDHYILYCEGELHGRQIRMAKLLGRDP
EQSQEALE~~D~~FREFSRAKGLNQEILELAQSETCSPGGQ

28. On page 76, please replace all of the text on page 76 with the following text:

Serum albumin fragment (SEQ ID NO: 108)

EAYKSEIAHRYNDLGEEHFRGLVL

Serum albumin fragment (SEQ ID NO: 109)

LSSAKERFKCASLQKGDRALKAWSVARLSQRFPKADFAEISKVVT

PVTEKSQCLAEVERDELPGDIPLSLAADEAEDKEACKNYQEAKDVE
LGTFLYEYSRRHPEYSVSLLLRLAKEATLEKCCATDDPPTCYAK
MEDEEKPAADIPOQNLAKINCEEEEKEGIMCQNATLARYEKKMPC
VSIPIIAVEAVSRKLGKVGETKCCKPESRMSCADDIES

5KVNYCKIKCLKGGVHTACKYGTSTKPNCGKMKVKAYGLTEAEK
QEILKVIHDFRQKVAKGLETRGNPGPQPPAKNMNNLVWNDELANI
AQVWASQCNYGHDTCKDTEKYPVGQNIKRSTTAALFDSPGKLVK
MWENEVKDENPNIEWSKNNLKKTGHTQMVMWAKTKEIGCGSVKY
VKDEWYTHYLVCNYGPSGNFRNEKLYEKK

Additional vespula sequences (NCBI entrez accession):

549193; 549192; 549191; 549190; 549189; 117414; 126761; 69576;
625255; 627189, 627188, 627187, 482382; 112561; 627186; 627185;
1923233; 897645; 897647; 745570; 225764; 162551.

Tree allergen sequences (mainly birch) sequences:

114922 Bet v 1 (SEQ ID NO: 87)

MGVFNYETETTSVIPAARLFKAFLDGDNLFPKVAPQAISSEVENIEG
NGGP GTI KKISFPEGFPKYVKDRVDEV DHTNF KYN YSVIEGGPIGD
TLEKISNEIKIVATPDGGSILKISNKYHTKG DHEVKA EQVKASKEMG
ETLLRAVESYLLAHSDAYN

21. On page 69, please replace all of the text on page 69 with the following text:

130975 Bet v 2 (SEQ ID NO: 88)

MSWQTYVDEHLMCDIDGQASNSLASAIVGHDGSVWAQSSSFQFK
PQEITGIMKDFFEPGHLAPTGLHLGGIKYMYVIQGEAGAVIRGKKGSG
GITIKKTGQALVFGIYEEPVTGQCNMVVERLDYLI DQGL

1168696 Bet v 3 (SEQ ID NO: 89)

MPCSTEAMEKAGHGHASTPRKRSLSNSSFRLRSESNTLRLRRIFDL

DFISI HQS1 NDSYFAYGCGEDDDNFFDMRKSI SQFFADSEGCGEKV
FDEDGDCGYISARELQMVLGKLGESEGSEIDRVEKMIVSVDSNRDGR
VDEEEFKDMMRSAVARSS

809536 Bet v 4 (SEQ ID NO: 90)

MADDHPQDKAERERIFKRFDANGDGKISAAELGEALKTLGSITPDE

VKHMMAEIDTDGDGFISEQEFIDFGRANRGLLKDVAKIF

543675 Que a I (SEQ ID NO: 91)- Quercus alba=oak trees (fragment)

GVFTXESQETSVIAPAXLFKALFL

543509 Car b I (SEQ ID NO: 92)- Carpinus betulus=hornbeam trees (fragment)

GVFNYEAETPSVIPAARLFKSYVLDGDKLIPKVAPQAIIXK

543491 Aln g I (SEQ ID NO: 93)- Alnus glutinosa=alder trees (fragment)

GVFNYEAETPSVIPAARLFKAFLDGDKLLPKVAPEAVSSVENI

1204056 Rubisco (SEQ ID NO: 94)

VQCMQVWPPLGLKKFETLSYLPPLSSEQLAKEVDYLLRKNLIPCLE

FELEHGFVYREHNRSPGYYDGRYWTMWKLPMFGCNDSSQVLKEL

EECKKAYPSAFIRIIGFDDK

22. On page 70, please replace all of the text on page 70 with the following text:

Additional tree allergen sequences (NCBI entrez accession number):

131919; 128193; 585564; 1942360; 2554672; 2392209; 2414158;

1321728; 1321726; 1321724; 1321722; 1321720; 1321718; 1321716;

1321714; 1321712; 3015520; 2935416; 464576; 1705843; 1168701;

1168710; 1168709; 1168708; 1168707; 1168706; 1168705; 1168704;

1168703; 1168702; 1842188; 2564228; 2564226; 2564224; 2564222;

2564220; 2051993; 1813891; 1536889; 534910; 534900; 534898;

1340000; 1339998; 2149808; 66207; 2129477; 1076249; 1076247;

629480; 481805; 81443; 1361968; 1361967; 1361966; 1361965;

629483; 629482; 629481; 541804; 320545; 81444; 841814; 629484

474911; 452742; 1834387; 298737; 298736; 1584322; 1584321; 584320;

1542859; 1542857; 1483232; 1483230; 1483228; 558561; 551640;

488605; 452746; 452744; 452740; 452738; 452736; 452734; 452732;
452730; 452728; 450885; 17938; 17927; 17925; 17921; 297538; 510951;
289331; 289329; 166953 .

Peanut

Peanut sequences

1168391 Ara h 1 (SEQ ID NO: 95)

MRGRVSPLMLLGILVLASVSATHAKSSPYQKKTENPCAQRCLQSC
QQEPDDLKQKACESRCTKLEYDPRCVYDPRGHTGTTNQRSPPGER
TRGRQPGDYDDDRQPRREEGGRWGPAGPREREREEDWRQPRED
WRRPSHQQPRKIRPEGREGEQEWTGTPGSHVREETSRNNSPFYFPSRR
FSTRYGNQNQNRIRVLQRFDQRSRQFQNLQNHRIVQIEAKPNTLVLP
KHADADNILVIQQGQATVTANGNNRKSFLDEGHALRIPSGFISYI
LNRHDNQNLRVAKISMPVNTPGQFEDFFPASSRDQSSYLQGFSRNT

23. On page 71, please replace all of the text on page 71 with the following text:

LEAAFNAEFNEIRRVLLEENAGGEQEERGQRRWSTRSSENNEGIV
KVSKEHVEELTKHAKSVSKKGSEEEGDIINPINLREGEPDLSNNFGK
LFEVKPDKKNPQLQDLDMMMLTCVEIKEGALMLPHFNSKAMVIVVV
NKGTGNLELVAVRKEQQQRGRREEEDEDDEEEEGSNREVRRYTAR
IKEGDVFIMPAAHPVAINASSELHLLGFGINAENNHRIFLAGDKDN
VIDQIEKQAKDLAEPGSGEQVEKLIKKNQKESHFVSARPQSQSQSPSSP
EKESPEKEDQEEENQGGKGPLLSILKAFN

Ragweed

113478 Amb a 1 (SEQ ID NO: 96)

MGIKHCCYIILYFTLALVTLQPVRSAEDLQQILPSANETRSLTTCGT
VTKHDGCWRCKADWAEFRKAALADCAGCIAKCGCIGKDCDINPDS
ELDDDVANPKEGTLREGAAQNRPIWHARDMVIREDFELAINNDK

TIDGRGAKVEIINAGEAIYNVKNIHHNMHDIVVNPGLIKSHDGPP
VPRKGSDGDAIGISGGSQIWIDHCSLSKAVDGLIDAKHGSTHFTVSN
CLEFTQHQYLLLFWDFDERGMLCTVAFNKFTDNVDQRMPNLRHGF
VQVVNNNYERWGSYALGGSAGPTILSQGNRFLASDIKKEVVGRYG
ESAMSESINWNWRSYMDFENGAIFVPSGVDPVLTPEQNAGMIPAE
PGEAVLRLTSSAGVLSCQPGAPC

113479 Amb a 2 (SEQ ID NO: 97)

MGIKHCCYILYFTLALVTLVQAGRLGEEVDILPSNDTRRSLQGCE
AHNIIDKCWRCKPDWAENRQALGNCAQGFGKATHGGKWGDIYM
VTSDQDDDVNPKEGTLRFGATQDRPLWIIFQRDMIIYLQQEMVVT
SDKTIDGRGAKVELVYGGITLMNVKNVIIHNIDIHDVRVLPGGRIKS
NCGPAIPRHQSVDGDAIHVTGSSDIWIDHCTLSDGLVDVNWGST
GVTISNCKFTHHEKAVLLGASDTHFQDLKMHVTLAYNIFTNTVHE

24. On page 72, please replace all of the text on page 72 with the following text:

RMPRCRGFFQIVNNFYDRWDKYAIGGSSNPTILSQGNKFVAPDFIY
KKNVCLRTGAQEPEWMTWNWRTQNDVLENGAIFVASGSDPVLT
EQNAGMMQAEPGDMVPQLTMNAGVLTCSGPAPC

113477 Amb a 1.3 (SEQ ID NO: 98)

MGIKQCCYILYFTLALVALLQPVRSAEGVGEILPSVNETRSLQACEA
LNIDKCWRGKADWENNQALADCAQGFAKGTYGGKWGDVYTV
TSNLDDD VANPKEGTLRFAAAQNPLWIIFKNDMVINLNQELV
SDKTIDGRGVKVEIINGGLTMNVKNIIHNINIHDVKVLPGGMIKS

HSNCKETQQSKAIEGADDIHVQDKGMIAIAAENMFEDNA DQR
MPRCRGFFQVNNNYDRWGTYAIGGSSAPTHCQGNRELAPDDQI
AENVLAARTGIGAAVSMIAWRSOKDEENGAIKACGSGTDPV
QSAGMIPAE PGEAAIKI TSSAGVESCHPGAPC

113476 Amb a 1.2 (SEQ ID NO: 99)

MGIKHCCYILYFTLALVTLLQPVRSAEDVVEFLPSANETRRSLKACE
AHNIIDKCWRCKADWANNRQALADCAQGFAKGTYGGKHGDVYT
CF
VTSDKDDD VANPKEGTLRFAAAQNRLWIFKRNMVHILNQELVV
NSDKTIDGRGVKVNIIVNAGLTMNVKNIIHHNINIHDIKVCPGGMIKS
NDGPPILRQQSDGDAINVAGSSQIWIDHCSLSKASDGLLDITLGSSHV
TVSNCKFTQHQFVLLGADDTHYQDKGMLATVAFNMF TDHVDQR
CF
MPRCRGFFQVVNNNYDRWGTYAIGGSSAPTI LSQGNRFAPDDHK
KNVLARTGTGNAESMSWNWRTDRDLLENGAIFLPSGSDPVLTPEQ
KAGMIPAEPGEAVLRLTSSAGVLSCHQGAPC

113475 Amb a 1.1 (SEQ ID NO: 100)

MGIKHCCYILYFTLALVTLLQPVRSAEDLQEILPVNETRRLTTSGAY
NIIDGCWRGKADWAENRKALADCAQGFGKGTGGKGDIYTVTS
ELDDD VANPKEGTLRGAAQNRLWIFERDMVIRLDKEMVVNSD

25. On page 73, please replace all of the text on page 73 with the following text:
CF
KTIDGRGAKVEIINAGFTLNGVKNVIIHNINMHDVKVNPGGLIKSND
GPAAPRAGSDGDAISISGSSQIWIDHCSLSKVDGLVDAKLGTRLT
VSNSLFTQHQFVLLFGAGDENIEDRGMLATVAFNFTDNVDQRMP
RCRHGFFQVVNNNYDKWGSYAIGGSASPTI LSQGNRFCAPDERSKK
NVLGRHGEAAAESMKWNWRTNKDVLENGAIFVASGVDPVLTPEQ
SAGMIPAEPGESALSLTSSAGVLSCQPGAPC

Cedar sequences

MDSPTIAAIIAESFAIGSCESDNPIIDSCWRGDSNWAQXRMKIADC
AVGFGSSTMGGKGGDLYTVTNSSDDPVNPPGILRYGATRDRPLWI
EISGNAMNIEKICMPMYIACYKEDGRGAQVYIENGCGPCAVHRAST
HEIGLYTYYGCSIISVIEGNVLINESEGVEPVHPQDGDAIETRLAENWE

DHNSFSNSSDGLVDVTLTSTGVTISNNLFFNHHKVMSLGHDAYSD
DKSMKVTVAENQFGPNCQRMPRARYGLVHVANNYDPWTIYAI
GGSSNPTILSEGNSTAPNESYKKQVTIRIGCKTSSCSNWVWQSTQ
DVFYNGAYFVSSGKYEGGNIYTKEAFNVENGATPHLTQNAGVL
TCSLSKRC

493632 Cry j IA precursor (SEQ ID NO: 102)

MDSPCLVALLVLSFVIGSCFSDNPIDSCWRGDSNWAQNRMKLADC
AVGFGSSTMGGKGGDLYTVTNSDDPVNPAAPGTLRYGATRDRPL
WIIFSGNMNIKLKMPMYIAGYKTFDGRGAQVYIGNGGPCVFIKRVS
NVIIHGLHLYGCSTSVLGNVLINESFGVEPVHPQDGDAHLRTATNI
WIDHNSFSNSSDGLVDVTLSTGVTISNNLFFNHHKVMLLGHDAY
SDDKSMKVTVAFNQFGPNCQRMPRARYGLVHVANNYDPWTIY
AIGGSSNPTILSEGNSTAPNESYKKQVTIRIGCKTSSCSNWVWQST
QDVFYNGAYFVSSGKYEGGNIYTKEAFNVENGATPQLTKNAGV
LTCSSLKRC

26. On page 74, please replace all of the text on page 74 with the following text:

1076242 Cry j II precursor - Japanese cedar (SEQ ID NO: 103)

MAMKLIAPMAFLAMQLIIMAAAEDQSAQIMLDHSVVEKYI.RSNRL
RKVEHSRHDAINIFNVEKYGAVGDGKHDCTEAFSTAWQAACKNPS
AMLLVPGSKKFVVNNLFFNGPCQPHFTFKVDGIIAYQNPASWKN
NRIWLQFAKLTGFTLMKGVIDGQQKQWWAGQCKWVNGREICND
RDRPTAIKFDFSTGLIHQGLKLMNSPEFHLVFGNCGVKHGISITAPR

GIGISIGSEGRENSRAEVSYVHVNGAKEFIDTQNGERIKTWQCGISGM
ASHIHYENVEMINSENPHLINQFYCTSASACQNQRSAVQIQDVTYKNI
RGESVAVAIQERGSDSMPCDKDIKESDISIKEESGKIASCENDNANC
YESGHVIPACKNISPSAKRKESKSHKHPKIVMVENMRAYDKGNRI

RIILGSRPPNCTNKCHGSPCKAKLVIVHRIMPQEYYPQRWICSCHG
KIYHP

1076241 Cry j II protein - Japanese cedar (SEQ ID NO: 104)

MAMKFIAPMAFVAMQLIIMAAAEDQSAQIMLDSDIEQYLRSNRSLR
KVEHSRHDAINIFNVEKYGAVGDGKHDCTEAFSTAWQAACKPSA
MLLVPGNKKFVVNNLEFNGPCQPHFTFKVDGIIAAYQNPASWKNN
RIWLQFAKLGTLMGKGVIDGQGKQWWAGQCKWVNGREICNDR
DRPTAIKFDFSTGLIIQGLKLMNSPEFHVLFGNCEGVKHGISITAPRD
SPNTDGIDIFASKNFHLQKNTIGTGDCCVAIGTGSSNIVIEDLICPG
HGISIGSLGRENSRAEVSYVHVNGAKFIDTQNGLRIKTWQGGSGMA
SHIIYENVEMINSEN PILINQFYCTSASACQNQRSAVQIQDVTYKNIR
GTSATAAAIQLKCSDSMPCKDIKLSDISLKLTSKGKIASCLNDNANGY
FSGHVIPACKNLSPSAKRKESKSHKHPKTVMVKNMGAYDKGNRTRI
LLGSRPPNCTNKCHGSPCKAKLVIVHRIMPQEYYPQRWMCSRHG
KIYHP

541803 Cry j I precursor - Japanese cedar (SEQ ID NO: 105)

27. On page 75, please replace all of the text on page 75 with the following text:

MDSPCLVALLVLSFVIGSCFSNDNPIDSCWRGDSNWAQNRMKLAADC
AVGFGSSTMGGKGGDLYTVTNSDDDPVNPPGTLRYGATRDRPLWI
IFSGNMNIKLKMPMYIAGYKTFDGRGAQVYIGNGGPCVFIKRVSNV
IIHGLHLYGCSTSVLGNVLINESFGVEPVHPQDGDALTLRTATNIWI
DHNSFSNSSDGLVDVTLSSGTISNNLFFNHKVMLLGHDAYSD

GISSNPHISEGNSFLAPNESYKRVTHRIQCKTSSSCSNWVWQS1Q
DVEYNGAYFVSSGKYEGGNIYTKKEAFNENGATPQLIKNAGVL
IUSIISKRC

541802 Cry j I precursor- Japanese cedar (SEQ ID NO: 106)

Can f 2 (SEQ ID NO: 110)

MQLLLTVGLALICGLQAQEGNHIEPQGGLLEELSGRWHSVALASN
KSDLIKPWGHFRVFIHSMSAKDGNLHGDLIPQDGQCEKVSLTAFKT
ATSNKF DLEYWGHNDLYLAEVDPKSYLIYMINQYNDDTSLV AHL
MVRDLSRQQDFLPAFESVCEDIGLHKDQIVVLSDDDRCQGSRD

Additional dog allergen protein (NCBI entrez accession):

1731859

Horse

Equus sequences:

1575778 Equ c1 (SEQ ID NO: 111)

MKLLLLCLGLILVCAQQEENSDVAIRNFDISKISGEWYSIFLASDVK
EKIEENGSMRVFVDVIRALDNSSLYAEYQT KVN GECTEFPMVFDKT
EEDGVYSLNYDGYNVFRISEFENDEHILYLVNFDKDRPFQLFEFYA
REP DVSP EIKEEFVKIVQKRGIVKENIIDLTKIDRCFQLRGNGVAQA

29. On page 77, please replace all of the text on page 77 with the following text:

3121755 Equ c 2 (SEQ ID NO: 112)

SQXPQSETDYSQLSGEWNTIYGAASNIXK

Euroglyphus (mite)

Euroglyphus sequences:

Eur m 1 (variant) (SEQ ID NO: 113)

TYACSINSVSLPSELDLRSLRVTPIRMQGGCGSCWAESGVASTESA
YLAYRNMSLDLAEQELVDCASQNGCHGDTIPRGIEYIQQNGVVQE

A AVHGIKDEN AFRHYDGRHMQHDNGYQPNNHAANIVGNGN LQG
VDYWIVRNSWDTTWGDNGYGYEAANINL

Additional cat allergen (SEQ ID NO: 114)

TYACSINSVSLPSELDLRSLRIVPIRMQGGCGSCWAESGVASTESA

YIAYRNMSLDLAEQELVDCASQNGCHGDTIPRGIEYIQQNGVVQE
HYYPYVAREQSCHRPNQAQRYGLKNYCQISPPDSNKIRQALTQTHTA
VAVIIGIKDLNAFRHYDGRTIMQHDNGYQPNYHAVNIVGYGNTQG
VDYWIVRNSWDTTWGDNGYGYFAANINL

Eur m 1 (variant) (SEQ ID NO: 115)

ETNAC SINGNAPAEIDL RQMRTVT PIRM QGGCGSC WAFSGVAATES
AYLAYRNQSLD LAEQELVDCASQHGCHGDTIPRGIEYI QHNGVVQE
SYRYVAREQSCRRPNAQRFGISNYCQIYPPNANKIREALAQTHSAI
AVIIGIKDLDAFRHYDGRTHIQRDNGYQP NYHAVNIVGYSNAQGVD
YWIVRNSWDTNWGDNGYGYFAANIDL

Eur m 1 (variant) (SEQ ID NO: 116)

ETSACRINSVNVPSEDLRSLRTVT PIRM QGGCGSC WAFSGVAATES
30. On page 78, please replace all of the text on page 78 with the following text:
AYLAYRNTSLD LSEQELVDCASQHGCHGDTIPRGIEYI QQNGVVEE
RSYPYVAREQQCRRPNSQHYGISNYCQIYPPDVKQIREALTQTHTAI
AVIIGIKDLRAFQHYDGRTHIQRDNGYQP NYHAVNIVGYGSTQGVD
YWIVRNSWDTTWGDSGYGYFQAGNNL

Poa (grass) sequences

113562 POLLEN ALLERGEN POA P 9 (SEQ ID NO: 117)

MAVQKYTVALFLVALVVGPAASYAADLSYGAPATPAAPAAGYTP
AAPAGAAPKATTDEQKMIEKINVGFKA AVAAAGGVPAANKYKTFV
ATFGAASNKAFAEA LSTEPKGAAVDSSKA ALTSKLDAA YKLAYKS

ELQVIDKVDAALKVAATAANAAPANDKEFVEF AENDAIKASTGCG
AYQSYKFIPALEAAVKQSYAATVATAPAVKYTVETALKKAITAMS
QAAQKXAKPAAA VIGEMAAA GAAIGAAA VAGGYYKA

113561 POA P 9 (SEQ ID NO: 118)

MAVHQYTVALFLAVALVAGPAASYAADVGYGA
PATLATPATPAA
PAAGYTPAAPAGAAPKATTDEQKLIEKINAGEKA
AAVAAAAGVPAV
DKYKTFVATFGTASNKAFAEALSTEPKGAAAASSNA
VLTSKLDAA
YKLAYKSAEGATPEAKYDAYVATLSEALRIIAGTLEV
HAVKPAGEE
VKAIPAGELQVIDKVDAAFKVAATAANAAPANDKFTV
FEAAFNDA
IKASTGGAYQSYKFIPALEAAVKQSYAATVATAPAV
KYTVFETALK
KAITAMSQAQKA
AKPAAVTATATGAVGAATGAVGAATGAATAA
AGGYKTGAATPTAGGYKV

113560 POA P 9 (SEQ ID NO: 119)

MDKANGAYKTALKAA
S A AVAPA
AEKFPVFQATFDKNLKEGLSGPDA
VGFAKKLDAFIQTSYLSTKAAEPKEKF
DLFVLSLTEVLRFMAGAVK
APPASKPAKPA
PKVAAYTPAAPAGAAPKATTDEQKLIEKINVGFK

31. On page 79, please replace all of the text on page 79 with the following text:

AAVAAAAGVPAASKYKTFVATFGAASNKAFAEALSTEPKGAAVAS
SKAVLTSKLDAAYK
LAYKSAEGATPEAKYDAYVATLSEALRIIAGT
LEVHGVP
KAEEVKAI
PAGELQVIDKVDAAFKVAATAANAAPAND
KFTV
FEAFNDA
IKASTGGAYQSYKFIPALEAAVKQSYAATVATAP
AVKYTVFETALK
KAITAMSQAQKA
AKPAAVTGT
TATSAVGAATGA
ATAAAGGYKV

Cockroach sequences

2833325 Cr p1 (SEQ ID NO: 120)

MKTALVFAAVVAFVAARFPDHKD
YKQLADKQFLAKQRDVRLFH

RGEPESVNYEKHREQAIMLYD
LEYEANDYDIIYKTLACWARDRVN
EGMFMYSSESIAVEHRDDMQGVMLPPP
YEVYPYLFDHDV
IHMAQ
KYWAKRNAGSGIHLISHV
IPA
NETERI
QDIII
LAYE
ISDV
NEN
NEN
YR
Y
YYY
YPSWYN
I
I
Y
Y
GHNIDRR
GEQ
YY
I
YKQIYARY
Y
E
ERLSNDI
P

DVYPFYYSKPVKSAYNPNLRYHNGEEMPVRPSNMYVTNFDLYYIA
DIKNYEKRVEDAIDFGYAFDEHMKPHSLYHDVHGMEYLADMIEG
NMDSNPFYFYGSIYHMYHSMIGHIVDPYHKMGLAPSLEHPETVLR
DPVFYQLWKRVDHFLFQKYKNRLPRYTHDELAFFGVKVENVDVGK
LYTYFEQYDMSLDMAVYVNNVDQISNVQLAVRLNHKPFTYNIE
VSSDKAQDVYVAVFLGPKYDYLGREYDLNDRRHYFVEMDRFPYH
VGAGKTVIERNSHDSNIIAPERDSYRTFYKKVQEAYEGKSQYYVDK
GHNYCGYPENLLIPKGKKGGQAYTFYVIVIPYVKQDEHDFEPYNY
KAFSYCGVGSERKYPDNKPLGYPFDRKIYSNDFYTPNMYFKDVIIH

HKKYDEVGVQGH

2231297 Cr p2 (SEQ ID NO: 121)

INEIHSIIGLPPFVPPSRRHARRGVGINGLIDDVIAILPVDELKALFQE
KLETSPDFKALYDAIRSPEFQSIISTLNAMQRSEHHQNLRDKGVDVD

32. On page 80, please replace all of the text on page 80 with the following text:

HFIQLIRALFGLSRAARNLQDDLNDLHSLEPISPRHRHGLPRQRRA
SARVSAYLHADDFHKIITTIEALPEFANFYNFLKEHGLDVVDYINEI
HSIIGLPPFVPPSRRHARRGVGINGLIDDVIAILPVDELKALFQE
KLETSPDFKALYDAIRSPEFQSIISTLNAMPEYQELLQNLRDKGVDVD
HFI RVDQGTIRTLSSGQRNLQDDLNDLALIPTDQILAIAMDYLANDAE
VQELVAYLQSDDFHKIITTIEALPEFANFYNFLKEHGLDVVDYINEI
HSIIGLPPFVPPSQRHARRGVGINGLIDDVIAILPVDELKALFQE
KLETSPDFKALYDAIDL RSSRA

MIGEKATVVEI AVAIIHHA AII FQRVPI YKEVHV IN EQYAGII KIGN
QNF LT VFDSTSCNVVVASQECVGGACVCPNLQKYEKLKPKYISDG
NAQVKEDDIEGSAVGRGHDSEIISNEIISQODIVIADIEISQEA
CIEI DVVVGLAAPGCPNALKGKIVLENEVEENLIAPVESIHARFQDGEH

FGEIIFGGSDWKYVDGEFTYVPLVGDDSWKFRLDGVKIGDTTVAPA
GTQAIIDTSKAIIVGPKAYVNPINEAIGCVVEKTTTRICKLDCSKIPS
LPDVTFVINGRNFNISSQYYIQQNGNLCYSGFQPCGHSDHFFIGDFF
VDHYYSEFNWENKTMGFGRSVE

SV

1705483 Bla g 4 (SEQ ID NO: 123)

AVLALCATDTLANEDCFRHESLVPNLDYERFRGSWHAAGTSEALT
QYKCWIDRFSYDDALVSKYTDSQGKNRTTIRGRTKFEGNKFTIDYN
DKGKAFAFSAPYSVLATDYENYAIVEGCPAAANGHVIYVQIRFSVRRF
HPKLGDKEMIQHYTLQVNQHKKAIEEDLKHFNLKYEDIHSTCH

2326190 Bla g 5 (SEQ ID NO: 124)

YKLTYCPVKALGEPIRFLLSYGEKDFEDYRFQEGDWPNLKPSMPFG
KTPVLEIDGKQTHQSVAISRYLGKQFGLSGKDDWENLEIDMIVDTIS
DFRAAIANYHYDADENSKQKKWDPLKKETIPYYTKFDEVVKANG

Applicants submit that a marked up version of the above amended pages is enclosed herewith.

Applicants further submit that, as required by 37 C.F.R. §1.821 (g), that the enclosed submission includes no new matter.

Respectfully submitted,

Date: _____

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[Handwritten signature]

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